30. (New) The method as recited in claim 29 wherein maintaining conditions further includes establishing a pressure of said processing environment to be in a range of $1x10^{-5}$ to $1x10^{-7}$ Torr.

REMARKS

I. RESTRICTION REQUIREMENT

In response to the Restriction Requirement, Applicants elect Group I without traverse. As a result, claims 15-22 have been cancelled.

II. AMENDMENTS TO THE SPECIFICATION

The written specification and pending claims have been amended to more clearly describe the invention. No new matter has been introduced by way of these amendments and the amendments were not necessitated to overcome the prior art. In addition, a substitute specification has been included to ease the prosecution of the patent application.

Applicant respectfully requests examination of the application in view of the amendments and remarks contained herein. A notice of allowance is earnestly requested.

CERTIFICATE OF MAILING
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to : BOX Non Fee Amendment, Director for Patents, Washington D.C. 20231

Signed: Jennifer Bonham
Typed Name: Jennifer Bonham
Date: 09-05-02

Respectfully submitted,

Kenneth C. Brooks
Reg. No. 38,393

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Trost, David et al. PATENT APPLICATION
Serial No: 09/838,126 Group Art Unit: 2812
Filed: April 20, 2001 Examiner: Christopher W. Lattin
For: METHOD AND SYSTEM TO ACHIEVE THERMAL TRANSFER BETWEEN A WORKPIECE AND A HEATED BODY DISPOSED IN A CHAMBER

CHART OF AMENDMENTS

Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicant provides this Chart of Amendments in connection with a Preliminary Amendment filed in the above-identified patent application. The Chart of Amendments shows the locations of amendments made to the application.

IN THE SPECIFICATION:

On page 4, line 7, please cancel "move" and insert--moved--in place thereof so that the paragraph containing this sentence reads as follows:

Referring to Figs. 1, 2 and 3, control processor 40 controls AMHS 16 to transfer plate 32 from, and to, stage 28. AMHS 16 stores the plates, one of which is shown as 32, in addressable locations, referred to as garages 50, so that plate 32 may be **[move]** moved between garages 50 and stage 28. Garages 50 are designed to minimize particulate cross-contamination, and have laminar airflow therethrough to facilitate thermal control. One to six pallets 52 may be stored in each of garages 50. Plate 32 may be stored in one of garages 50 resting atop of pallet 52 or may be stored in a separate garage 50 without pallet 52 being present, discussed more fully below. With this configuration, garages

50 allow plate 32 and pallet 52 to be heated to a desired temperature.

On page 4, line 29, please cancel "plat" and insert--plate--in place thereof so that the paragraph containing this sentence reads as follows:

Also included in AMHS 16 is an airlock 60 that is designed to thermally condition plate 32 before entering write chamber 24. Vacuum handling system 53 facilitates movement of **[plat]** plate 32/pallet 52 combination within airlock 60 and between airlock 60 and write chamber 24, discussed more fully below. Garages 50, airlock 60 and robotic mechanisms are enclosed by a housing 62 to provide cleanroom filtration and temperature control of an ambient enclosed by housing 62. AMHS 16 also includes a detection system (not shown), such as a barcode reader, that senses information recorded on pallet 52 that indicates characteristics of pallet 52, such as the address of the garage 50 that corresponds thereto, the size plate 32 supported thereon and the like.

On page 7, line 14, please cancel "plate32" and insert--plate 32--in place thereof so that the paragraph containing this sentence reads as follows:

Referring to Figs. 3, 6 and 7, a cross-sectional view of airlock 60 is shown with a lift mechanism disposed within airlock chamber 72. Lift mechanism includes two spaced-apart platforms 92a and 92b and a static shield 94. The lift mechanism operates to move the **[plate32]** plate 32/pallet 52 combination, resting on platform 92a, from a

position in airlock chamber 72 proximate to a slot valve (not shown) to a position proximate to rapid thermal condition system 90. Vacuum handling system 53 includes a pair of linear robots (not shown) that move plate 32/ pallet 52 combination among platforms 92a, 92b and airlock 60 and write chamber 24. The vacuum handling system 53 pushes a polished rod 53a through a pair of sliding seals 53b. The volume between these seals is pumped so that an effective seal is maintained with airlock chamber 72 with minimal forces required.

On page 11, line 16, please cancel "an" and insert--a-- in place thereof so that the paragraph containing this sentence reads as follows:

A third linear motor includes a coil 338 and stator 340. Coil 338 is coupled to bearing housing 314 and is in electromagnetic communication with stator 340. Stator 340 extends parallel to the Y direction. A fourth linear motor includes a coil 342 and stator 344. Coil 342 is coupled to bearing housing 316 and is in electromagnetic communication with stator 344. Stator 344 extends parallel to the Y direction. Stators 340 and 344 extend between opposing grounding bodies 348 and 350. In addition, journals 322 and 324 extend between, and are coupled to, grounding bodies 348 and 350. To reduce the friction to which journals 310, 312, 322, 324 are exposed, **[an]** a fluid-bearing system is employed.

On page 11, line 32, please cancel "an" and insert--a-- in place thereof and on page 12, line 9, please cancel "to atmosphere" and insert--to the atmosphere--in place thereof

so that the paragraph containing these sentences reads as follows:

Referring to Figs. 1 and 13, fluid, such as air, is injected into air inlet 308c by stage fluid control subsystem 71 to provide a cushion, referred to as **[an]** a fluid-bearing, between exterior surface 312c and exterior surface 309a. In this manner, mechanical disturbance due, in part, to imperfections in the machining of the various parts of stage 28 may be avoided. To that end, fluid is introduced into air inlet 308c. The fluid exiting air inlet 308c bifurcates into two substantially symmetrical flows. One of the flows is evacuated through annular grooves 308h, 308i and 308j. The remaining flow is evacuated through annular grooves 308k, 308l and 308m. Annular grooves 308h, 308i, 308j, 308k, 308l and 308m are in fluid communication with stage fluid control subsystem 71. The pressure associated with fluid entering air inlet 308c is greater than the pressure associated with annular grooves 308h, 308i, 308j, 308k, 308l and 308m. Air entering air inlet 308c travels toward annular grooves 308h, 308i, 308j, 308k, 308l and 308m between exterior surface 312c and exterior surface 309a. Fluid entering annular grooves 308j and 308k is vented **[to atmosphere]** to the atmosphere through exhaust passages 308p and 308s, respectively. Fluid traveling into annular grooves 308i and 308l is evacuated under vacuum of approximately 10 Torr by a vacuum system (not shown) in fluid communication therewith via exhaust passageways 308o and 308r, respectively. Fluid traveling into annular grooves 308h and 308m is evacuated under vacuum of approximately 0.1 Torr by a vacuum system (not shown) in fluid communication therewith via exhaust passageways 308n

and 308q, respectively. In this manner, independent evacuation pressures are provided among annular grooves 308h, 308i, 308j, 308k, 308l and 308m.

IN THE CLAIMS:

Please cancel claims 15-22.

1. (Unchanged) A method to achieve thermal transfer between a workpiece disposed within a chamber having a heated body disposed therein, said method comprising:

placing said workpiece at a first position within said chamber, spaced-apart from said heated body a first distance;

establishing said pressure within said chamber to be at a predetermined level;

placing said workpiece a second distance from said heated body to effectuate thermal transfer between said body and said workpiece, with said second distance being less than said first distance.

2. (Amended) The method as recited in claim 1 further including maintaining said workpiece in said second **[position]** distance until thermal equilibrium between said heated body and said workpiece is achieved.

3. (Unchanged) The method as recited in claim 1 wherein establishing said pressure further includes increasing a pressure level within said chamber by filling said chamber with a gas.

4. (Unchanged) The method as recited in claim 1 wherein establishing said pressure further includes decreasing a pressure level within said chamber by evacuating said chamber.

5. (Amended) The method as recited in claim 1 wherein **[pressurizing said chamber to a predetermined level]** establishing said pressure further includes filling said chamber with a nitrogen gas to achieve a pressure in **[the]** a range of 25 to 100 Torr.

6. (Amended) The method as recited in claim 1 wherein said second distance is in **[the]** a range of 0.001 to 0.009 inch.

7. (Amended) The method as recited in claim 1 wherein said first distance **[in]** is greater than 0.75 inch.

8. (Unchanged) The method as recited in claim 1 further including decreasing said pressure in said chamber to establish said pressure level to be in a range of $1x10^{-5}$ to $1x10^{-7}$ Torr.

9. (Amended) The method as recited in claim 8 further including providing a write chamber and moving said **[plate]** workpiece, after increasing said pressure, to said write chamber.

10. (Amended) A method to achieve thermal transfer between a workpiece disposed within a chamber having a heated body disposed therein, said method comprising:

placing said workpiece at a first position within said chamber, spaced-apart from said heated body a distance;

evacuating said chamber to a first pressure level

reducing said distance; and

evacuating, after reducing said distance, said chamber to a second pressure level, less than said first pressure level **[,with said distance being selected]** to effectuate thermal transfer between said workpiece and said heated body while reducing thermal variations due to evacuating said chamber to said second pressure level.

11. (Amended) The method as recited in claim 10 further including pressurizing said chamber to a level in **[the]** a range of 25 to 100 Torr by filling said chamber with nitrogen before reducing said distance.

12. (Unchanged) The method as recited in claim 11 wherein reducing said distance further includes reducing said distance to position said workpiece from said heat body in a range of 0.001 to 0.009 inch.

13. (Amended) The method as recited in claim 10 wherein evacuating, after reducing said distance, said chamber, further includes evacuating said chamber to establish said pressure level to be in **[the]** a range of $1x10^{-5}$ to $1x10^{-7}$ Torr.

14. (Unchanged) The method as recited in claim 11 further including providing a write chamber and moving said plate, after evacuating said chamber to said second pressure level, to said write chamber.

15. CANCELLED

16. CANCELLED

17. CANCELLED

18. CANCELLED

19. CANCELLED

20. CANCELLED

21. CANCELLED

22. CANCELLED

23. (New) A method to achieve thermal transfer between a workpiece and a heated body in a processing environment, said method comprising:

placing said workpiece a first distance from said from said heated body;

establishing a pressure of said processing environment to be at a predetermined level;

placing said workpiece a second distance from said heated body to effectuate thermal transfer between said body and said workpiece, with said second distance being less than said first distance; and maintaining said workpiece at said second distance until thermal equilibrium between said heated body and said workpiece is achieved.

24. (New) The method as recited in claim 23 wherein establishing said pressure further includes decreasing a pressure level within said chamber by evacuating said chamber.

25. (New) The method as recited in claim 23 wherein said second distance is in a range of 0.001 to 0.009 inch.

26. (New) The method as recited in claim 25 wherein said first distance in greater than 0.75 inch.

27. (New) The method as recited in claim 26 wherein establishing said pressure further includes decreasing said pressure in said chamber to establish said pressure level to be in a range of $1x10^{-5}$ to $1x10^{-7}$ Torr.

28. (New) A method to achieve thermal transfer between a workpiece and a heated body in a processing environment, said method comprising:

placing said workpiece a first distance from said heated body;

placing said workpiece a second distance from said heated body, with said second distance being less than said first distance;

maintaining conditions in said processing environment suitable to effectuate thermal transfer between said body and said workpiece; and

maintaining said workpiece at said second distance until thermal equilibrium between said heated body and said workpiece is achieved.

29. (New) The method as recited in claim 28 wherein said second distance is in a range of 0.001 to 0.009 inch.

30. (New) The method as recited in claim 29 wherein maintaining conditions further includes establishing a pressure of said processing environment to be in a range of $1x10^{-5}$ to $1x10^{-7}$ Torr.

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